APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,434	08/14/2003	Lee Chien-Hsin	10559-845001/P16871	9869

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EXAMINER
MUI, GARY

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Office Action Summary	Application No.	Applicant(s)
		10/642,434	CHIEN-HSIN, LEE
		Examiner	Art Unit
		Gary Mui	2616

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1 – 28 have been considered but are moot in

view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1 – 4, 7 – 11, 14, 22 – 25, and 28 are rejected under 35 U.S.C. 102(e) as being

anticipated by Shah et al. (US 2002/0131412 A1, hereinafter "Shah").

For claims 1, 8, and 22, Shah teaches receiving multiple data packets (see paragraph 0025;

multiple data packet incoming); processing the received data packets to identify a data type

for each received data packet (see paragraph 0028); sending the processed data packets to

multiple data paths including sending a first data packet to a first data path selected based on

an identified data type of the first data packet, and sending a second data packet to a second

data path selected based on an identified data type of the second data packet (see paragraph

0028; each data block is processed and sorted into either unicasts or multicast); and using

another data path different from the first and second data paths to communicate in advance at

least the identified data types of the first and second data packets to an arbitrator of one or

more a resources shared by at least the first and second data paths before the arbitrator

receives the sent data packets (see paragraphs 0011 and 0030 and figure 1 (single request

line); a request is sent in advanced to the scheduler that is to be transmitted).

For claims 2, 9, and 23, Shah teaches determining how to handle the sent data packets based

on the communicated data types of at least the first and second data packets (see paragraph

0028).

For claims 3, 10, and 24, Shah teaches sending each of the at least first and second data

packets to one of the resources shared by at least the first and second data paths based on the

communicated data types of the at least first and second data packets (see paragraph 0031).

For claims 4, 11, and 25, Shah teaches dropping at least one of the sent data packets based on

the communicated data types of at least the first and second data packets (see paragraph

0066).

For claims 7, 14, and 28, Shah teaches the data type of the first data packet comprises a non-

IP multicast packet], and the data type of the second data packet comprises an IP multicast

packet (see column 0028; multicast packet and unicast packet).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

6.   Claims 5, 12, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah

in view of Gotoh et al. (US 2003/0095551 A1, hereinafter "Gotoh").

For claims 5, 12, and 26, Shah teaches all of the claimed subject matter with the exception of

sending a third data packet to a third data path selected based on a data type of the third data

packet. Gotoh et al. from the same field of endeavor teaches the use of a third queue type, out

of band, for transmission (see paragraph 0071 lines 4 – 17, and figure 5 box 221). Therefore,

it would have been obvious to one of ordinary skill in the art at the time of the invention was

made to add a third queue type as taught by Gotoh into the switch taught by Shah. The

motivation for doing this is to increase the versatility of the system.

Claim Rejections - 35 USC § 103

7.   Claims 6, 13, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah

in view of Prabhakar et al. (US 6,351,466 B1, hereinafter "Prabhakar").

For claims 6, 13, and 27, Shah teaches all of the claimed subject matter with the exception of

communicating an order that the data packets were received. Prabhakar from the same field

of endeavor teaches for each output state, noting the temporal order in which the packets

destined for that output stare are received by the input stages; and controlling the transfer

stage so that, for each output stage, the packets destined for that output stage are transferred

from the input stage to that output stage in the noted order (see paragraph 2 lines 45 – 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to send the order of the packets as taught by Prabhakar into the switch of

Shah. The motivation for doing this is for better reassembly of fragmented packet.

Claim Rejections - 35 USC § 103

8.   Claims 15 – 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Shah in view of Hooper et al. (2004/0252686 A1, hereinafter "Hooper").

For claim 15, Shah teaches receiving multiple data packets (see paragraph 0025; multiple data

packet incoming); processing the received data packets to identify a data type for each ·

received data packet (see paragraph 0028); sending the processed data packets to multiple

data paths including sending a first data packet to a first data path selected based on an

identified data type of the first data packet, and sending a second data packet to a second data

path selected based on an identified data type of the second data packet (see paragraph 0028;

each data block is processed and sorted into either unicasts or multicast); and using another

data path different from the first and second data paths to communicate in advance at least the

identified data types of the first and second data packets to an arbitrator of one or more a

resources shared by at least the first and second data paths before the arbitrator receives the

sent data packets (see paragraphs 0011 and 0030 and figure 1 (single request line); a request is

sent in advanced to the scheduler that is to be transmitted).

Shah fails to teach at least one Ethernet MAC (Medium Access Control) device coupled to at least one of the at least one communication ports, and at least one processor having access to at least one Ethernet MAC device. Hooper from the same field of endeavor teaches a network processor the hardware-based multithreaded processor interfaces to network devices such as a media access controller device e.g., a 10/100BaseT Octal MAC or a Gigabit Ethernet device coupled to communication ports or other physical layer devices (see paragraph 0014 lines 1 – 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the MAC device and processor as taught by Hooper into the switch taught by Shah. The motivation for doing this is that MAC will allow for efficient transmission of packets.

For claim 16, Shah teaches determining how to handle the sent data packets based on the communicated data types of at least the first and second data packets (see paragraph 0028).

For claim 17, Shah teaches sending each of the at least first and second data packets to one of the resources shared by at least the first and second data paths based on the communicated data types of the at least first and second data packets (see paragraph 0031).

For claim 18, Shah teaches dropping at least one of the sent data packets based on the communicated data types of at least the first and second data packets (see paragraph 0066).

For claim 21, Shah teaches the data type of the first data packet comprises a non-IP multicast packet], and the data type of the second data packet comprises an IP multicast packet (see column 0028; multicast packet and unicast packet).

Claim Rejections - 35 USC § 103

9.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shah and Hooper

as applied to claim 15 above, and further in view of Gotoh.

For claim 19, Shah and Hooper teaches all of the claimed subject matter with the exception of

sending a third data packet to a third data path selected based on a data type of the third data

packet. Gotoh et al. from the same field of endeavor teaches the use of a third queue type, out

of band, for transmission (see paragraph 0071 lines 4 – 17, and figure 5 box 221). Therefore,

it would have been obvious to one of ordinary skill in the art at the time of the invention was

made to add a third queue type as taught by Gotoh into the switch taught by Shah. The

motivation for doing this is to increase the versatility of the system.

Claim Rejections - 35 USC § 103

10.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shah and Hooper

as applied to claim 15 above, and further in view of Prabhakar.

For claim 20, Shah and Hooper teach all of the subject matter of the claimed invention with

the exception of communicating an order that the data packets were received. Prabhakar from

the same field of endeavor teaches for each output state, noting the temporal order in which

the packets destined for that output stare are received by the input stages; and controlling the

transfer stage so that, for each output stage, the packets destined for that output stage are

transferred from the input stage to that output stage in the noted order (see paragraph 2 lines

45 – 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time

of the invention was made to send the order of the packets as taught by Prabhakar into the

switch of Shah. The motivation for doing this is for better reassembly of fragmented packet.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. McKeown (US 6,212,182 B1), Hughes et al. (U 6,747,971 B1), Kurokawa et al. (US

7,103,043 B2), Horii et al. (US 2003/0099234 A1), and Roth et al. (US 2003/0231588 A1) are

cited to show processing data packets.

12.   **Examiner's Note**: Examiner has cited particular paragraphs or columns and line numbers

in the references applied to the claims above for the convenience of the applicant. Although the

specified citations are representative of the teachings of the art and are applied to specific

limitations within the individual claim, other passages and figures may apply as well. It is

respectfully requested from the applicant in preparing responses, to fully consider the references

in entirety as potentially teaching all or part of the claimed invention, as well as the context of

the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the

portion(s) of the specification which dictate(s) the structure relied on for proper interpretation

and also to verify and ascertain the metes and bounds of the claimed invention.

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action.   Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action.   In the event a first reply is filed within TWO MONTHS of the

mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action.   In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the date of this final action.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gary Mui whose telephone number is (571) 270-1420.   The

examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where

this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be

obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GM   08.22.2007

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER